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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of: North et al.

Serial No.: 10/780,322 Examiner: Chu, C.

Filed: 02/17/2004 Group Art Unit: 2815

For: HEAT PIPE THERMAL MANAGEMENT OF HIGH POTENTIAL ELECTRONIC CHIP PACKAGES

**CERTIFICATE UNDER 37 CFR 1.8(a)**

I, SAMUEL W. APICELLI, REGISTRATION NO. 36,427, HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450

ON

July 21, 2004

SAMUEL W. APICELLI

*Samuel W. Apicelli*

**TRANSMITTAL LETTER**

Mail Stop DD  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please find enclosed for filing:

- ☒ Information Disclosure Statement, PTO-1449 and references.
- ☒ Should any fees be incurred please debit Deposit Account No. 04-1679. This Transmittal Letter is submitted in duplicate.
- ☒ Return Postcard

Respectfully submitted,

Date:

7/21/04

*Samuel W. Apicelli*

Samuel W. Apicelli  
Registration No. 36,427  
Customer No. 41396  
DUANE MORRIS, LLP  
305 North Front Street, P.O. Box 1003  
Harrisburg, PA 17108-1003  
(717) 237-5516

Docket No.: H1799-00241



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*July 21, 2004*

SAMUEL W. APICELLI

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**INFORMATION DISCLOSURE STATEMENT**

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Commissioner for Patents  
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Alexandria, VA 22313-1450

Sir:

Pursuant to the Duty of Disclosure set forth in 37 CFR 1.56, the materials listed on the enclosed form PTO-1449 are hereby brought to the attention of the Examiner. A copy of each is enclosed.

This Information Disclosure Statement is being submitted prior to the mailing date of a first Office Action on the merits.

Japanese Patent Document No. JP 57087588 A discloses a hollow tube for a heat pipe that is formed from an electrically insulating material so as to prevent deterioration of cooling performance of an electronic apparatus such as a semiconductor element. The Examiner's attention is directed to Figures 1-2, and the English Abstract.

Docket No.: H1799-00241

Japanese Patent Document No. JP 3196657 A discloses an apparatus to improve cooling efficiency comprising heat pipes coupled with heat sinks that are fixed on thermal conduction plates that communicate with thermal conduction plates in contact with ICs. The cooling plates contact all the heat sinks. Flowing fluid of high specific heat through a channel of the cooling plate adds in the thermal transfer process. The Examiner's attention is drawn to Figs. 1-4.

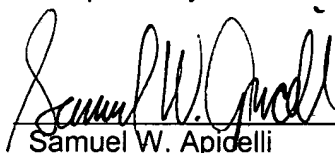
The claimed invention is patentable over the enclosed references. No representations are made regarding the references other than those set forth above.

The Examiner is requested to acknowledge consideration of the information provided in this paper in accordance with prescribed procedures.

Date:

7/21/04

Respectfully submitted,



Samuel W. Apidelli

Registration No. 36,427

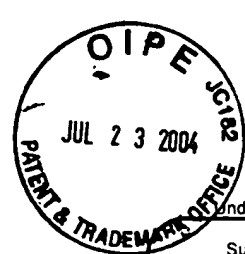
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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/780,322
Filing Date	02/17/2004
First Named Inventor	North et al.
Art Unit	2815
Examiner Name	Chris C. Chu
Attorney Docket Number	H1799-000241

Sheet 1 of 2

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 3,613,778	10/19/1971	Karl T. Feldman, Jr.	
		US- 4,046,190	09/06/1977	Marcus et al.	
		US- 4,118,756	10/03/1978	Nelson et al.	
		US- 4,231,423	11/04/1980	Haslett	
		US- 4,366,526	12/28/1982	Lijoi et al.	
		US- 4,503,483	03/05/1985	Basiulis	
		US- 4,697,205	09/29/1987	Eastman	
		US- 4,777,561	10/11/1988	Murphy et al.	
		US- 4,880,052	11/14/1989	Meyer, IV et al.	
		US- 4,912,548	03/27/1990	Shanker et al.	
		US- 4,921,041	05/01/1990	Akachi	
		US- 4,931,905	06/05/1990	Cirrito et al.	
		US- 4,982,274	01/01/1997	Murase et al.	
		US- 5,219,020	06/13/1993	Akachi	
		US- 5,253,702	10/19/1993	Davidson et al.	
		US- 5,268,812	12/07/1993	Conte	
		US- 5,283,715	02/01/1994	Carlsten et al.	
		US- 5,331,510	07/19/1994	Ouchi et al.	
		US- 5,333,470	08/02/1994	Dinh	

**FOREIGN PATENT DOCUMENTS**

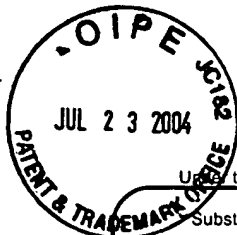
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		JP 57087588 A	06-1982	OKADA et al.		
		JP 3196657 A	08/1991	Suzuki		

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,349,237	09/20/1994	Sayka et al.	
		US- 5,355,942	10/18/1994	Conte	
		US- 5,408,128	04/18/1995	Furnival	
		US- 5,409,055	04/25/1995	Tanaka et al.	
		US- 5,446,318	08/29/1995	Koike et al.	
		US- 5,826,645	10/1998	Meyer, IV et al.	
		US- 5,880,524	03/09/1999	Xie	
		US- 5,883,426	03/16/1999	Tokuno et al.	
		US- 6,055,157	04/25/2000	Bartilson	
		US- 6,148,906	11/21/2000	Li et al.	
		US- 6,154,364	11/28/2000	Girrens et al.	
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